

Application No.: 10/662,248  
Attorney Docket: AMKOR-036C

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants:	Sean T. Crowley et. al.	)	Confirmation No.	2413
		)		
Serial No.:	10/662,248	)	Art Unit:	2814
		)		
Filed:	09/15/2003	)	Examiner:	Thao X. Le
		)		
For:	Near Chip Size Semiconductor	)		
	Package	)		

**REPLY BRIEF UNDER 37 C.F.R. § 1.193(a)**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This Reply Brief Under 37 C.F.R. § 1.193(a) is filed herewith in triplicate, and is responsive to the Examiner's Answer mailed on October 28, 2005 in the above-captioned patent application. Applicant/Appellant, has appealed from the final rejection of Claims 14-31 as set forth in the Final Office Action of January 7, 2005. The Claims on Appeal were previously set forth in the Appendix to Applicant's Appeal Brief filed on October 3, 2005.

**WAIVER OF ORAL HEARING**

As indicated in Appellant's opening Brief, for purposes of the present Appeal, Appellant hereby waives the oral hearing permitted under 37 C.F.R. § 1.194.

**ARGUMENT**

Applicant hereby incorporates by reference all remarks and arguments previously submitted in the Appeal Brief filed on October 3, 2005. Applicant respectfully submits that the Claims on Appeal are further patentable for the reasons set forth below.

**I. The Examiner's Rejection of Independent Claims 24 and 28**

**a. Claims 24 and 28 are each drawn to a leadframe, not a post-singulation subassembly of a semiconductor package.**

In Examiner's Answer, the Examiner notes that "[I]n the final structure, the leads 33 of Asano do not have the common connecting portion 44, i.e., in isolation from each other in the final structure; thus, it would read on the claim limitations." The Examiner further states that "Asano explicitly discloses 32 is a LEADFRAME, col. 5 line 15. Removing connecting portion 44 of Asano does not change or alter the LEADFRAME structure 32 that would result in a different structure from the structure of the claimed invention." (Examiner's Answer, pages 8-9).

Appellant respectfully disagrees. The Appellant finds support for its position in the specification of Asano (see col. 5, lines 45-46) which states that the central end of each inner lead is connected to a connecting portion 44. Furthermore, the Appellant finds additional support for its position in the specification of Asano (see col. 6, lines 40-60) which states that the inner leads 33 of the leadframe 32 are secured on the heat spreader 35 through an adhesive 35a as shown in Fig. 5 (Step S1). At this moment, the connecting portions 44 are arranged around the heat spreader 35. On the heat spreader 35, the connecting portions 44 of the inner leads 33 are cut and removed, for example, by exposing laser rays thereon (Step S2). Thus, from the Asano specification, it can be seen that when the connecting portions 44 are severed, the leadframe 32 has already been attached to the heat spreader 35.

The Examiner argues that removal of the connecting portion 44 of Asano does not alter the leadframe structure 32. However, the Asano specification includes Figures 3A, 3B, 4 and 12B which show the leadframe 32 with the connecting portion 44. Figure 2A of Asano depicts a semiconductor package sub-assembly wherein the connecting bar portion 44 (and presumably the tie bars 43) have been removed from the leadframe 32, such cut leadframe 32 being used in combination with a heat spreader/die pad and effectively converted into a portion of a semiconductor package subassembly, thus no longer being a leadframe per se. Therefore, since independent Claims 24 and 28 are each drawn to only a "leadframe", not a subassembly comprising a plurality of leads 33 affixed to a die pad or heat spreader 35, Appellant respectfully submits that the Examiner's reasoning is flawed.

**b. In Asano, the inner leads of each set are not linearly aligned and arranged in spaced, generally parallel relation to each other.**

The Examiner's answer emphasizes that "either the inner portions 33a or outer lead portion 34 of the leads 33 are linearly aligned and arranged in spaced, generally parallel relation to each other, as in fig. 2A and top view of fig. 3B" of Asano. The Examiner argues that either the inner or the outer lead reads on the claim limitation, because "[T]he claim language does not require the entire length of the lead being generally parallel." (Examiner's Answer, pgs. 9-10).

Appellant respectfully disagrees. Appellant's independent Claims 24 and 28 each recite, inter alia, ... a plurality of leads extending from the tie bar in isolation from each other and segregated into two sets, the leads of each set being linearly aligned and arranged in spaced, generally parallel relation to each other such that each of the leads of one set extends in opposed relation to a respective one of the leads of the remaining set.

Parallel is defined as being an equal distance apart everywhere. Thus, Appellant submits that the aforementioned language of Claims 24 and 28 makes clear that *the leads as a whole, and not just portions of the leads*, are linearly aligned and arranged in generally parallel relation to each other so as to be extensible in opposed relation to respective leads of the remaining set. Had Appellant intended otherwise, it would have presented Claims 24 and 28 to recite "*at least portions of the leads of each set being linearly aligned...*" Thus, Appellant respectfully submits that the Examiner has misinterpreted the aforementioned claim language.

**II. The Examiner's Rejection of Independent Claim 14**

The Examiner's Answer states, "the Examiner submits that either the inner lead 6 or the outer leads 7 of Lee are linearly aligned and arranged in spaced, generally parallel relation to each other, as shown in fig. 7 and top view of fig. 5 below. The claim language does not require entire length of the lead being generally parallel; thus an either lead 6 and 7 would read on the claim limitations." (Examiner's Answer, pg. 12).


Appellant respectfully disagrees. To reiterate the argument made in section I(b) above, parallel is defined as being an equal distance apart everywhere. Thus, Appellant respectfully submits that Claim 14 is distinguishable from Lee on the same basis that Claims 24 and 28 are distinguishable from Asano.

## II. Conclusion

On the basis of the foregoing and the previously submitted Appeal Brief, Appellant respectfully submits that the claims presently on appeal are not anticipated nor rendered obvious by the various combinations of references relied upon by the Examiner. Accordingly, Appellant submits that the Examiner's stated grounds of rejection have been overcome, and that Claims 14-31 are now in condition for allowance.

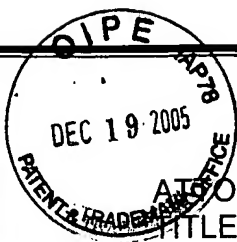
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Respectfully submitted,

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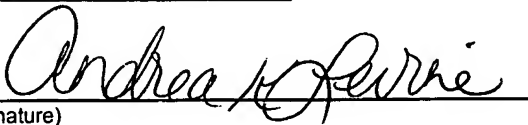
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TITLE: Near Chip Size Semiconductor Package

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First Named Inventor	Sean T. Crowley
Art Unit	2814
Examiner Name	Thao X. Le
Attorney Docket Number	AMKOR-036C

**ENCLOSURES (Check all that apply)**

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Remarks

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

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Signature			
Printed name	Mark B. Garred		
Date	12/16/05	Reg. No.	34,823

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